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## ACCIDENT PREVENTION

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### DEVELOPMENT

The first serious attempts at systematic accident prevention were made abroad, following the introduction of compensation acts. From time immemorial it had been the rule that an injured workman was entitled to "damages" only if it could be clearly shown that he was injured through some fault of his employer. Therefore, for his own protection the employer would usually try to show that each accident was the fault of the injured workman or of one of his fellow-employees. Under these conditions it is not to be wondered at that little accident prevention work was done. Since the employer disclaimed all blame for the accident, he did not feel any responsibility for its prevention.

This situation was unsatisfactory for all concerned. It cost the employer large sums for accident expense, litigation, etc., only a small part of which ever reached the injured employee; it also brought about unending controversy and ill-feeling.

The first compensation act along modern lines was adopted in Germany in 1884, or more than thirty years ago. This act provided compensation for workmen injured in the course of their employment, regardless of whether it could be shown that the employer was at fault or not. This situation led to an entirely new attitude towards industrial accidents on the part of the employer. The prevention of accidents immediately became an important consideration, since the new act made it certain that each accident would add to the cost of his insurance. This resulted in a careful study being made of the causes of accidents and in the adoption of rules for their prevention.

Within the next few years compensation acts were passed in various other countries, until the beginning of the present century found that nearly all important civilized countries (with the exception of our own) had adopted the compensation principle in some form or other.

Fortunately, accident prevention in the United States did not wait for the passage of compensation acts (although the adoption of such acts has unquestionably given a decided stimulus to the movement). Energetic accident prevention campaigns were under way in some of the large corporations of this country ten years ago, or several years before the first compensation act went into effect. The good results thus accomplished have served as a constant inspiration for other plants to take up this work voluntarily.

It is interesting to notice the variation in methods used by the different countries in attacking the accident prevention problem. The German compensation act required manufacturers to insure in mutual associations, each association representing a certain industry. It then became the duty of these associations to prepare rules and regulations for the prevention of accidents in the plants insured with them. While excellent work has been done along this line it would seem that German paternalistic methods have been carried rather too far in accident prevention, as well as in some other lines. Instead of educating the workmen in principles of caution, rules of conduct have been prescribed in minute detail. For example, workmen are warned against reclining or sleeping on roofs or high scaffolds, or in occupied horse stalls; workmen are directed not to swing a hammer until they know that no one is standing behind them, whom they might hit; engineers are told to turn on the light in their engine rooms when it gets dark, etc., etc.

England has followed a different accident prevention policy. The method in England has been to outline general safety principles for the guidance of the employer, following this up by government inspection. Serious accidents are investigated by the inspectors or by special commissions, and where it is possible to place the blame on some individual, a fine is often administered. By way of illustrating these fines, the following examples from one of the annual boiler inspector's reports may be cited:

In one case where a laundry cylinder was wrecked, the fault was attributed to a defective casting, and the maker of the machine was fined \$500. In another case, a cast iron dye extractor exploded on account of the reducing valve being inoperative and permitting excessive pressure. The mechanical foreman, who was responsible for keeping the valve in order, was found guilty of negligence and ordered to pay \$100. In another case, an engine used for agri-

cultural purposes exploded on account of corroded plates. This engine was hired by one concern from another. The responsibility was divided between the owner and the user, and they were fined \$125 and \$250 respectively. In another case, an engine used on a farm exploded and a man who had advised the user to purchase it was fined \$100. Apparently advice is not always so "cheap" as we have been informed! Thus we have the builder, owner, operator, foreman, lessor, lessee and advisor, all of whom suffered pecuniary punishment for neglecting to take what, in the eye of the law, was proper precaution.

In the United States a new and powerful agency has been employed for the prevention of accidents, in addition to safeguards and rules such as those used abroad. This is "Safety Education." It consists in the systematic training of the workmen along safety lines and the enlistment of their interest and coöperation in the safety movement. For this purpose, safety bulletins and moving pictures are used, safety signs and slogans are posted, safety talks are given. Safety committees are formed among the workmen themselves, through whose inspections valuable suggestions are often received. Through these and similar agencies the men are brought to realize that the accident problem is *their* problem, that the workman loses more than his employer when an accident occurs, and that he is the greatest gainer by accident prevention.

This plan of education has not stopped with the workman but has extended to the public through campaigns conducted by national safety organizations, state and municipal authorities, public service corporations, etc.; it has also been taken into public schools so that the new generation may be reared to think in terms of "Safety First" from the beginning.

#### VALUE OF ACCIDENT PREVENTION TO THE EMPLOYER

Employers are coming more and more to realize that accident prevention is "good business." Aside from the direct saving in compensation cost, accident prevention has an important bearing on the labor situation. In all manufacturing industries, labor forms a large item in the cost of the finished product. Any improvement in labor conditions has a direct effect on output and manufacturing cost. The sense of security and good will that results from the realization on the part of the employees that their

employer is doing everything he can for their safety thus becomes a valuable asset.

The prevention of accidents eliminates the cost of breaking in new employes to take the place of the injured workmen; it also eliminates the disturbance and loss of efficiency that naturally result on the part of other employes who see one of their number killed or injured. Last but not least among the benefits of accident prevention is the employer's satisfaction in knowing that the suffering and hardship which are the inevitable by-product of accidents, have been reduced to the minimum among the workmen for whose safety he is responsible.

#### VALUE TO EMPLOYES AND TO SOCIETY

If the prevention of accidents is important from the standpoint of the employer it is doubly so from that of the employe. Even where compensation acts are in effect, a considerable part of the financial loss is borne by the injured workmen. Beyond this,—it is the workman who suffers all of the pain. No money can make good to him the loss of his eyes or his hands, or repay him for having to take his place among his fellowmen, handicapped by some permanent injury.

From the standpoint of society at large, accident prevention is one of the important conservation movements of the day. According to reports of the Massachusetts Industrial Accident Board, the workmen of that state alone are losing about three million dollars per year in wages, as a result of industrial accidents. The employers of the state are required to pay something over four million dollars per year for providing compensation benefits. This cost must be ultimately carried by the consuming public in the form of higher prices for the goods it buys.

Thus it becomes apparent that the reduction of accidents means a direct economy to the entire community. It also reduces the burden of expense for maintaining courts, hospitals, and institutions of all kinds for the care of dependent families.

#### POSSIBILITIES OF ACCIDENT PREVENTION WORK FOR THE INSURANCE COMPANY

The company which insures employes against injury is in a peculiarly favorable condition to assist in the campaign of accident

prevention. Through constant investigation and observance of the causes of accidents, such a company is able to show the employer just what conditions should be eliminated in order to prevent a recurrence of these accidents. The person who is in touch with only a single plant is likely to underestimate the seriousness of the situation because comparatively few accidents occur in any one plant. Since the insurance company is familiar with not one, but many plants, it has a breadth of experience that is essential to a proper understanding of the accident prevention problem. Being constantly brought face to face with the human side of the question through its dealings with injured employes, the insurance company, in addition, is in a position to make a strong appeal to the humanitarian instincts of the employer.

#### THE PLACE OF ACCIDENT PREVENTION IN THE ORGANIZATION OF AN INSURANCE COMPANY

On account of the value of accident prevention work to the employer and its effect in reducing the losses of the insurance company, accident prevention is one of the most important lines of service an insurance company can maintain.

During recent years plans of individual rating have been adopted by nearly all compensation insurance companies. The principle of individual rating is to give each plant an insurance rate that will reflect its accident hazards, so that the good plant will receive a rate lower than the average, and the poor plant a rate higher than the average, based upon compliance with specified safety conditions.

Thus accident prevention becomes the basis of rate modification, and to its other features is added that of being an important factor in determining the premiums upon which are dependent the stability of the insurance company and the protection of the injured workmen.

#### FUTURE POSSIBILITIES

The ground-work of accident prevention has been well established. Commonly accepted safety standards have been developed, and the methods that produce the best results have been clearly demonstrated. What is needed now to insure the greatest success for this important work is publicity—a thorough dissemina-

tion of the knowledge that the great suffering and waste, resulting from our annual toll of accidents, can be largely eliminated. "Preparedness" for safety has established an organized army working effectively for this end. What is now needed is more recruits from all ranks—employers, employes, the public at large, the parents, the children.

While the high tide of the safety movement has not yet been reached in this country, the growth of this movement during the past ten years has been rather remarkable. It started with the work of a few scattered industrial concerns and is now actively supported by thousands of enthusiastic exponents all over the country. This growth reflects credit on the energy and progressive spirit of the American people, and points to even greater accomplishment as time goes on, and the purpose and possibilities of the safety movement become more fully understood.